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ating seedling responses of 21 native and introduced plant species to elevated saline conditions.

Three ebb-flow tables were set to water at 1 of 3 levels of sea salt solutions: 0 (control), 15, and 30 dS/m (deciSiemens per meter). Plants were seeded in 98 containers per tray, and then the trays were randomly placed on the tables with 4 replicates per species per table. Plant survival and biomass production were evaluated May–August 2006 and March–July 2007.

Findings of this study should provide critical information on the plant species that exhibit the most salinity tolerance and have the best chances for establishment on salt affected soils. This information can be used to aid in restoration efforts of saline soils and help reduce the impacts of erosion on these soils.

Cooperative funding was provided by the USDA Natural Resources Conservation Service and the Zapata County Soil and Water Conservation District.

Evaluation of Native Plant Germplasms for Ecotype Development

Forrest S. Smith, William Ocumpaugh, Paula D. Maywald, Keith A. Pawelek, Robin L. Harkey, Stephanie A. Campbell, John Lloyd-Reilly, and Shelly D. Maher

For development of native plant releases for South Texas, we are evaluating numerous native plant accessions at Rio Farms (Hidalgo Co.), Rancho Blanco (Webb Co.), Texas Agricultural Experiment Station at Uvalde (Uvalde Co.) and Beeville (Bee Co.), Bladerunner Farms (Atascosa Co.), and the Stephen J. “Tio” and Janell Kleberg Wildlife Research Park (Kleberg Co.). During 2006 and 2007, we completed evaluations of orange zexmenia, pink pappusgrass, and whiplash pappusgrass.

Based on the evaluations, 4 accessions of orange zexmenia, 7 accessions of pink pappusgrass, and 3 accessions of whiplash pappusgrass were suitable. These accessions will be released to the commercial seed industry in 2007 and 2008.

We continue to evaluate accessions of awnless bush sunflower, bundleflower, multi-flowered false rhodesgrass, crinkleawn, slim tridens, rough tridens, little bluestem, yellow Indiangrass, sideoats grama, and big bluestem. Native germplasm releases will be made for each of these species in the next 2 to 6 years.



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Orange zexmenia is one of the herbaceous plants being evaluated by South Texas Natives and cooperators.

We hope to release multi-flowered false rhodesgrass and awnless bush sunflower in 2008. Plant species already released include Arizona cottontop, slender grama, Texas grama, and hairy grama and they will continue to be evaluated for long-term survival.

Cooperative funding was provided by South Texas Natives.

Effect of Seed Coating and Seeding Rate on Native Grass Establishment

William Ocumpaugh, Forrest S. Smith, Jeff Rahmes, Domingo Martinez, and Paula D. Maywald

Seed coatings are an excellent option for making mechanical (drill or broadcast) plantings of native grass seed more effective. Empirical evidence and recommendations of commercial seed salesmen also indicate that coating the seed of grasses such as buffelgrass has allowed the use of lower seeding rates while still resulting in successful establishment.

In late summer 2007, we will plant pink pappusgrass, Arizona cottontop, multi-flowered false rhodesgrass, and slender grama using coated and uncoated seed at the standard seeding rate (20 pure live seeds/square foot) and at half the standard seeding rate. We will collect data on stand establishment at several sites over a 2 to 3 year period.

The results of this research will be used to determine if the use of seed coatings can facilitate reduced

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